



HIGH-TEMP OIL SHUT OFF VALVE KIT

#02-210

INSTALLATION AND OPERATING MANUAL

READ THIS MANUAL TO ENSURE PROPER INSTALLATION

**DAMAGE TO THIS PART CAN RESULT FROM IMPROPER
INSTALLATION**



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WARNINGS AND DISCLOSURES

- This product is not to be used as a replacement for due diligence, improper installation or required supervision of an oil burning stove.
- Do not leave a burning heater/stove unattended.
- This product is offered as a safety feature to guard against overheating of an oil heater/stove.
- This product is intended for use only with Dickinson/Sig Marine oil heaters and stoves, and Dickinson/SigMarine does not guarantee its use in conjunction with any other products.

CAUTION

The capillary tube portion of this product can easily be damaged. It resembles a wire but is a very small tube filled with a liquid and can **not** be treated like a wire. Please review the following precautions to ensure that the tube is protected. It is best to coil the tube into an approximate diameter of 4" (100mm) to keep it from damage when installing. We stress the importance of these guidelines.

WARNING: Do not cut the capillary tube

WARNING: Do not bend capillary tube

WARNING: Do not crimp or compress capillary tube

WARNING: Ensure that there are no kinks in the capillary tube.

WARNING: Filtered fuel is necessary to prevent damage to the solenoid.

DANGER - NEVER LIGHT OR RELIGHT A HOT BURNER

The burner must be cold before relighting or risk possible **explosion**

Fuel Line Fittings

This product involves a solenoid shut off valve manufactured by Teddington Controls of the U. K. The valve was originally fitted with BSPT fittings, or British Standard Pipe thread fittings. We have included for your use two $\frac{1}{4}$ " NPT (National Pipe Thread) adaptor fittings as these are far more common in North America and some other parts of the world. Please ensure that you have correctly identified what standard thread you are using and use the adaptors if necessary. Failure to use the appropriate fittings could result in leakage and or fire.

The remainder of this manual will cover the following topics:

1. Installation of the Oil Shut-Off Kit
2. Calibration of the Oil Shut-Off Kit
3. Operation of the Oil Shut-Off Kit

Installation of the "High Temp Oil Shut Off Valve Kit"

Flue Bracket and Probe Bracket Installation

Using the hose clamp provided, attach the pipe bracket part to the exhaust flue 16" (41cm) or so above the top of the heater/stove. Tighten clamp firmly but do not over tighten . This will leave about 3/16" (5mm) airspace between the skin of the pipe and the pipe bracket .

For initial installation and calibration, position this bracket where it can be easily worked with. Place a red high heat silicon washer on each of the

mounting studs of the probe bracket, and position the probe bracket into the mounting bracket using the holes closest to the chimney pipe.

Position the mounting nuts so you have good access as you **will** be removing the nuts and placing the probe bracket into holes further away from the chimney.

Solenoid Shut-off Valve Installation

10' of capillary tube has been provided between the solenoid and the heat probe. Ensure that you have enough capillary tube to reach the probe bracket and leave a few loops of extra tube behind the heater/stove so you have extra for when calibrating as you may need to relocate the probe bracket higher on the chimney pipe.

Note the flow of fuel indicator on the valve when installing it in the fuel supply line. The arrow indicates the direction of the flowing fuel.

Note that it is best to have easy access to the reset button on the bottom of the shut-off valve. We recommend the location of the shut-off valve to be within a foot or two (30 to 60cm) of the heater/stove.

Heat Probe Installation

Use pliers and make a small bend on the bottom corner of the probe sleeve so the probe does not fall through, then insert the probe being careful with the capillary tube as to not kink or bend the tubing.

Calibration of the “High Temp Oil Shut Off Valve”

When you start your heater/stove it should go out a short time after it gets hot, proving that the safety shut-off valve is working correctly. Once you know it works correctly, it will need calibration so it shuts the fuel supply off when the heater/stove gets too hot and you would like it to shut down.

The oil metering valve has a thermal safety shut off, however the solenoid valve can be adjusted to shut down when you feel it is running too hot for your liking, location, and size of boat.

When the probe bracket is mounted in the first set of holes closest to the pipe it is in its most sensitive position. The following steps will calibrate the device so that it does not shut off your heater/stove too soon, but still shuts off the flow of oil when necessary. The calibration stage may take some time and can be frustrating.

After the valve has shut-off the heater/stove wait until the burner is cold, Turn the oil metering valve to the off position, then reposition the probe into another set of holes further away from the pipe. When the heater/stove is ready to restart- Push the reset button on the bottom of the solenoid valve in and the fuel will start to flow back into the oil metering valve. You may need to repeat making adjustments until the heater/stove will stay on low settings for 3 to 4 hours.

If you have used all of the holes and the stove is still shutting off before this stage, move the flue mounting bracket up four inches and start again at the first hole position. This procedure allows for the incremental changes that will properly calibrate your device while ensuring the probe is always close enough to the flue pipe to be effective.

Reposition the mounting bracket to the rear of the chimney pipe but do not use the mounting screws and keep the clamp on. Reposition any extra loops of capillary tube behind the lower section of the heater/stove. Check for any leaks at the solenoid fittings.

Operation of the “High Temp Oil Shut Off Valve”

Under regular operation, the probe solenoid valve will shut off when the probe detects the outside pipe temperature in excess of 95 degrees C. The valve can not be reset until it cools to 30 degrees C. As you continue to use the heater/stove it will still shut off at a temperature you find is not hot enough so you may have to relocate the mounting bracket higher and/or relocate in mounting holes further away from the pipe until you do not want the heater/stove to get any hotter. This is the slow stage as it may take some

time to get it set the way you want it however being a manual safety device it is better to make small adjustments. When you are sure about the location of the bracket you can mount it with the screws and remove the clamp.

SHUT OFF THE OIL METERING VALVE BEFORE RE-SETTING THE SOLENOID SHUT OFF VALVE

Do not light a heated burner ! The heat probe will reset before the pot is cool enough to receive new oil. Wait an additional five minutes with the assist fan running before attempting to light the burner again. This button can also be used as a fuel shut off valve.

